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Description of Male Agrilus bentseni Knull and One New Species (Coleoptera: Buprestidae)

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Since *Agrilus bentseni* Knull (1954) was described, more material has been collected. The male is slightly smaller than the female. Front of head greenish becoming cupreous on vertex. Antennae serrate from the fourth segment. First two ventral abdominal segments not modified. Anterior and middle tibiae armed on inside at apex with a small tooth.

The species should be placed next to *A. lautuellus* Fisher (1928). On *A. bentseni* the elytral apical patch of white pubescense is elongate and parallel to suture; whereas on *A. lautuellus* the entire apical third is pubescent, with anterior margin of pubescent area extending obliquely backward from the suture to the lateral margin. In addition the male genitalia of the two species differ as shown by Figs. 1 and 2 and also by Fisher (1928), figure 48 a and b.

A. bentseni occurs on the foliage of myrtle croton (*Bernardia myricaefolia* (Scheele) S. Wats.) in Hidalgo and Starr Counties, Texas, in March and April. *A. lautiellus* is on the foliage of capote (*Diospyros texana* Scheele).

Agrilus hazardi n. sp. Figs. 3 and 4

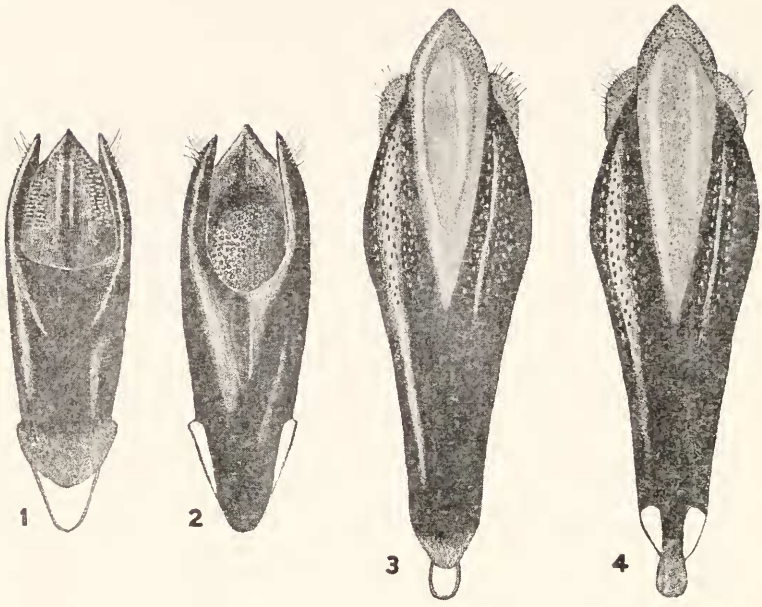
Male.—Form of *A. otiosus* Say, shining; head and antenna greenish blue; pronotum cupreous becoming bluish green toward sides; elytra black; pro-, meso-, and metasternum and legs greenish blue; abdomen cupreous.

Head granulose, sparsely lightly punctate, punctures more evident toward apex, lower part of front densely pubescent; antennae extending to past middle of pronotum when laid along side, serrate from the fourth segment.

Pronotum wider than long, widest about middle; sides subparallel from apical angles to about middle, then broadly rounded to basal angles; when viewed from the side, marginal and submarginal carinae separated in the front, joined near base; anterior margin strongly sinuate, median lobe broadly rounded; basal margin strongly sinuate; disk convex with two shallow median depressions, an oblique deep depression and a feeble prehumeral carina each side; surface granulose, with feeble transverse rugae, shallow punctures between rugae. Scutellum transversely carinate.

Elytra wider than pronotum; sides subparallel behind base, constricted in front of middle, expanded behind middle, then obliquely narrowed to rounded serrulate apieces; disk flattened, a basal depression each side; surface imbricate, recumbent pubescence short.

Abdomen beneath finely punctate, first and second segments slightly concave at middle, sparsely clothed with short recumbent pubescence. Prosternal lobe broadly emarginate. Tibiae armed with a distinct tooth on inner margin at apex. Tarsal claws similar on all feet, cleft near middle, outer tooth acute at apex, inner tooth shorter, broader and turned inward, the points touching.



Figs. 1 and 2. *Agrilus bentseni* Knull, ♂ genitalia; 3 and 4. *Agrilus hazardi* n. sp., ♂ genitalia.

Length 4.4 mm; width 1.1 mm.

Described from one male specimen collected in Gilmer Co., Ga., May 25, 1961, by E. I. Hazard, to whom I am indebted for the specimen. Type in collection of author.

This species comes near *A. atricornis* Fisher (1928) and *A. osburni* Knull (1937). The male genitalia as shown in Figs. 3 and 4 and as illustrated by Fisher, and Knull (1944) will separate them. The fifth antennal segments of *A. osburni* and *A. atricornis* are about as long as wide, whereas in *A. hazardi* the fifth segment is nearly twice as long as wide.

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Development of Pigmentation in the Pupa and Callow of Trachymyrmex septentrionalis (Hymenoptera: Formicidae)

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The color of fungus-growing ants (Attini) is notoriously variable, as is often the case among ants in general. Various forms have been described, using color as one of the characters. The most northerly of all fungus-growers, *Trachymyrmex septentrionalis* McCook, is an example.

Wheeler (1907) created *obscurior* var. nov. as "necessary to distinguish the darker southern form" of *septentrionalis*. Later (1911) he created *vertebrata* on the basis of color and used color in large part in naming *seminole*. Creighton (1950) retained *obscurior* and *seminole* as geographical races but synonymized *vertebrata* with the typical form.

It is the purpose of this article to demonstrate the development of pigmentation in several of the stages of this species in its three castes, as a contribution both to embryology and to systematics. During the development of pigmentation, intermediate stages may also be useful in indicating relationships between species. In any case a particular color form that is known only from original or a few collections should always be suspect.

New Jersey colonies of *Trachymyrmex septentrionalis* have been kept in my laboratory for years and results of some obser-